

In the Claims

Please amend the claims as follows:

1. (Currently Amended) An instrument insertable in a body cavity for dilating the cavity, comprising;

a rigid, integral support frame having an opening therein and a longitudinal centerline passing therethrough; and

at least three blades circumferentially spaced relative to said centerline, each having an elongated section, a second end section and an intermediate section pivotally connected to said frame wherein each blade is pivotal in a plane including said centerline,

wherein each of said blades is provided with means operatively interconnecting said support frame and said blade for yieldingly biasing said elongated section of said blade into engagement with the elongated sections of said other blades, and each of said blades is provided with means for restraining the pivotal movement thereof at selected angles.

2. (Previously Presented) The instrument according to claim 1, wherein each of said blades is pivotal between a closed position where the elongated sections of the blades are adjacent each other and an open position where the elongated sections are distant from each other.

3. (Original) The instrument according to claim 2, wherein ends of the elongated sections of the blades distal from the frame form a hemisphere when the blades are in the closed position.

4. (Previously Presented) The instrument according to claim 1, wherein neck sections of the elongated sections adjacent the frame define a conical envelope when the blades are in a closed position and define a cylindrical envelope when the blades are in the open position.

5. (Original) The instrument according to claim 1, wherein the blades are hinge coupled to an outer surface of the frame.

6. (Original) The instrument according to claim 5, wherein the elongated sections of the blades extend through the opening of the frame.

7. (Original) The instrument according to claim 6, wherein the second end sections and the elongated sections of each blade are connected together at a respective hinge coupling to form an acute angle.

8. (Previously Presented) The instrument according to claim 2, wherein said biasing means bias the blades into the closed position.

9. (Previously Presented) The instrument according to claim 8, wherein said biasing means are springs.

10. (Previously Presented) The instrument according to claim 1, wherein said blade restraining means comprise a plurality of blocks, each block interacting with a respective second end section of a respective blade to hold the respective blade in the selected position.

11. (Original) The instrument according to claim 10, wherein a series of stops on each block prevents a closing movement of the respective blade when each said stop abuts the respective blade.

12. (Previously Presented) The instrument according to claim 11, wherein each block pivot about an axis perpendicular to a plane including the pivot axis of the respective blade.

13. (Original) The instrument according to claim 12, wherein biasing means bias the blocks against the blades.

14. (Original) The instrument according to claim 1, wherein the frame has the shape of an octagon.

15. (Original) The instrument according to claim 1, wherein the frame is ring shaped.

16. (Previously Presented) The instrument according to claim 1, wherein the blades have a cross section of one of the group consisting of a round-shaped, u-shaped, v-shaped or square with rounded corners.

17. (Previously Presented) An instrument for dilating a body cavity, comprising:
a rigid, integral annular frame having a hollow center and a longitudinal axis passing therethrough, and

a plurality of blades pivotally connected to the frame at pivotal connections, each blade having an elongated section extending in a direction generally parallel to the axis and a second section extending in a generally opposite direction, said second and elongated sections meeting at a pivot, said blades spaced apart on the frame to form an envelope between the elongated sections, wherein said blades pivot with respect to each other between a closed position where the elongated sections are adjacent each other for insertion into the body cavity and an open position where the elongated sections are distant from each other for dilating the body cavity,

wherein each of said blades is provided with means operatively interconnecting said frame and said blade for yieldably biasing said elongated section of said blade into engagement with the elongated sections of said other blades, and each of said blades is provided with means for releasably restraining said blade at a selected position between said opened and closed positions.

18. (Previously Presented) The instrument according to claim 17, wherein the restraining means comprise blocks each having a series of stops on a surface thereof which contacts a respective second section of a respective blade.

19. (Original) The instrument according to claim 18, wherein each of the stops prevents the closing movement of the respective blade when each said stop abuts the respective second section.

20. (Previously Presented) The instrument according to claim 19, wherein each block pivots about an axis perpendicular to the axis of rotation of the respective blade.

21. (Original) The instrument according to claim 20, wherein biasing means bias the blocks against the blades.

22. (Original) The instrument according to claim 17, wherein end portions of the elongated sections form a hemisphere when the blades are in the closed position.

23. (Original) The instrument according to claim 17, wherein neck sections of the elongated sections adjacent the frame form a cone when the blades are in a closed position and are parallel when the blades are in the open position.

24. (Original) The instrument according to claim 23, wherein end portions of the elongated sections form a hemisphere when the blades are in the closed position.

25. (Original) The instrument according to claim 24, wherein intermediate portions extending between the end portions and the neck portions of the elongated sections form a generally bulbous end to the instrument when the blades are in the closed position.

26. (Original) The instrument according to claim 17, wherein the blades are hinge coupled to an outer circumference of the frame.

27. (Original) The instrument according to claim 26, wherein the elongated sections of the blades extend through the center of the frame.

28. (Original) The instrument according to claim 27, wherein the second and elongated sections of each blade are connected together at the pivotal connection to form an acute angle.

29. Cancel.

30. (Original) The instrument according to claim [[29]] 17, wherein the biasing means are springs.

31. (Previously Presented) The instrument according to claim 17, wherein the blades have a cross section of one of the group consisting of a round-shaped, u-shaped, v-shaped or square with rounded corners.

32. (Previously Presented) An instrument insertable in a body cavity for dilating said cavity, comprising:

a frame having an opening through a centerline thereof;

a set of elongated blades circumferentially spaced relative to said centerline, each having a first end section, a second end section and an intermediate section pivotally connected to said frame for pivotal movement in a plane including said centerline;

means for yieldably biasing said first end sections together into engagement, permitting said first end sections to be inserted into said cavity; and

means for releasably restricting the pivotal movements of said blades,

whereby when said first end sections are biased together, said engaging first end sections may be inserted into said cavity, when said engaging end sections have been inserted into said cavity, said second end portions may be gripped and drawn together against the action of said biasing means to cause a separation of said first end sections apart and thus dilate said cavity, when said second end sections are released, said restricting means will yieldably restrict the pivoting action of said blades, and upon completion of any procedure with which the instrument is used, said restricting means may be released to cause said first end sections to pivot into engagement with one another and thus permit the instrument to be withdrawn from said cavity.